the dose from three to ten grains per drachm.—*Med. Times and Gaz.*, Sept. 15, 1855, from *Buchner's Repert.*, 1855, No. 4.

8. *On the Diet of Weaned Children.*—Dr. Gumprecht some time since published a paper upon the usefulness of expressed carrot-juice combined with farinaceous substances, in the feeding of children about to be, or already weaned. Further experience has confirmed the value of this mild and easily digested nutriment; but, although suited for the great majority of these cases, it may seem to be contraindicated in those of children who, whether from naturally weak digestive powers, improper diet, or neglected tooth-diarrhœa, have acquired a disposition to purging. Such cases, the digestive powers being prostrated, require food that, by reason of its analogy with the formative elements of the infantile organism, allows of a rapid intimate assimilation, without prolonged previous metamorphosis of the original nutriment, and without leaving undigested residue. It has been attempted to nourish these children with diluted milk and farinaceous substances, such as salap, arrowroot, etc.; but it has been overlooked that starch-flour cannot be completely dissolved even in much water at a boiling heat, and the thick covering of the granules remaining undissolved, may give rise to indigestion. To obviate this, roasted and not raw starch should be employed. But the weaned child requires also albumen, and a proper proportion of organic salts and fat. Salts, fat, and albumen, or salts, sugar, and albumen, are the three constituents that are indispensable for the proper nutriment of the body.

The author regards it as an error to refuse meat to such children in favour of less digestible vegetable substances. This meat is best supplied in the form of raw, prime rump-steak, devoid of fat, rubbed into a paste, of which about two spoonfuls, divided into four repasts, are given daily, with or without sugar. Either this, or Liebig's flesh broth, should be given with some roasted farinaceous substance. This nourishment is especially indicated when any inclination to diarrhœa exists, and forms one of the best remedies in obstinate diarrhœa lactantium, as also in conjunction with other measures in atrophia infantum.

From its great utility in the above cases, the natural conclusion is, that it may be the proper nourishment for children already weaned, especially in weak, scrofulous, and lymphatic subjects. By the process of roasting, the outer covering of the starch granules become destroyed, and the flour is converted into gum and dextrine, which are easy of digestion. It should then be prepared by first mixing the starch with cold water, pouring on the hot water, and boiling, stirring the while. Liebig's broth, either with or without the farinaceous addition, is an excellent diet in such children, when inclined to diarrhœa. It is made by chopping up small pieces of beef, quite free from fat, as if for sausages. A pound is mixed with equal parts of water, and, adding a little salt, this is boiled for half an hour. It is then strained, separating the fat, coagulated albumen, and fibrin, and leaving all the nutritious and sapid portions. For the poor, an excellent broth may thus be prepared from horse-flesh, and, when mixed with the roasted meal, forms an excellent diet for scrofulous and rickety children.—*Med. Times and Gaz.*, Sept. 15, 1855, from *Journal für Kinderk*, Bd. xxiv.

9. *Syrup of Hydriodic Acid.* By James Murdoch, of Glasgow.—Hydriodic acid, in a liquid form, has been introduced into medicine by Dr. Andrew Buchanan, as having the therapeutical properties of iodine, without its irritant action. It has also been employed by him in the treatment of choleraic disease, and accordingly becomes a preparation of considerable interest.

The following speedy formula he has given for preparing it: Take of tartaric acid, 264 grains; iodide of potassium, 330 grains. Dissolve each separately in f℥iss of distilled water; mix the solutions, agitate, and strain to separate the bitartrate of potash, adding water to make up the measure to f℥vi¼. Each fluidrachm of this solution should contain 5.072 grains of hydriodic acid, equal to about 5 grains of iodine. When the solutions are mixed, the liquid assumes a slight yellow colour, and in ten minutes after gives a slight tinge of violet with a cold solution of starch, which gradually changes to a deep blue.

This rapid decomposition appears to arise in some measure from the agitation necessary to effect the separation of the bitartrate, and consequently greater contact with the air. When hydriodic acid is prepared by the sulphuretted hydrogen process, it does not show decomposition for an hour or two after it is prepared; but if moderately agitated, it shows the presence of free iodine much more speedily. It is, therefore, essential, in dispensing this acid, to prepare it extemporaneously, and supply it frequently, to obtain its medicinal action. It may very speedily be prepared by the above process, and, for convenience, the solutions may be kept ready made and mixed when required; but as 264 grains of tartaric acid in f℥iss of distilled water measures f℥xv, and 330 grains of iodide of potassium, in the same quantity of water, measures f℥xiv, it will be necessary to employ them in these relative proportions. Dr. Buchanan also directs it to be taken in starch gruel, which has the chemical effect of combining with the iodine that is liberated during the time of its administration.

I find that hydriodic acid may be prevented from undergoing this decomposition when in the form of a syrup. The antiseptic properties of sugar are well known to the pharmaceutist, in the vegetable kingdom in the case of vegetable syrups, and in the mineral kingdom in the case of certain protosalts of iron, where the presence of sugar prevents the latter from becoming peroxidized by the absorption of oxygen, as in the cases of the carbonate, iodide, and protonitrate of iron.

What method, therefore, will be best adapted for the preparation of this syrup? In the usual way of preparing hydriodic acid, by passing sulphuretted hydrogen through iodine suspended in water, the iodine is very apt to be enveloped in portions of the sulphur that is set free, and escape the action of the HS. This being guarded against, a solution of hydriodic acid could be obtained, from which a syrup might be prepared, if cautiously operated upon, that would contain no free iodine. The repugnance, however, that is usually felt by the pharmaceutist to the employment of HS, as the means of preparing pharmaceutical products, would render this process objectionable, although it should be found to be in other respects available. With another means of preparing this acid, by decomposing a solution of iodide of barium by the equivalent of sulphuric acid, and filtering to separate the insoluble sulphate of barytes, as the iodide of barium itself is an unstable compound, it would be necessary to prepare this salt at each manipulation.

Assuming, therefore, that if a syrup can be prepared by Dr. Buchanan's solution that shall contain no free iodine, it will furnish the most suitable manner of obtaining this acid for medicinal purposes, I have to propose the following proportions for a syrup. It is necessary, however, to observe, as one of the conditions of success, that the iodide must be free from any trace of iodate of potash.

Of four different samples of iodide that came under my notice, all gave a slight iodine reaction with solution of tartaric acid and starch. These, although containing extremely little of the other impurities usually found in iodide of potassium, were contaminated with a minute portion of iodate of potash. They had been prepared by what is known as the caustic potash process, and accordingly extremely liable to contain some undecomposed iodate. But as it is quite possible to produce a salt by this process that shall be entirely free from even a trace of iodate, I think it is only necessary to guard manufacturers against this salt occurring in their product, to make it suitable for preparing hydriodic acid. I have accordingly used an iodide prepared by the *Pharmacopœia* method of decomposing the solution of iodide of iron by carbonate of potash:—

The Syrup.—Take of sugar ℥ij, ʒss; water ʒv. Dissolve in a flask with the aid of heat, and allow it to cool. Prepare solution of hydriodic acid as before mentioned, without adding any of the additional water. This operation should be done speedily, and it may answer for that end to strain it through calico. If paper were used, decomposition would show itself before filtration could be completed, unless the quantity was small. Of this strong solution take f℥ss and ℈j, and mix with the syrup. The whole should measure f℥ijss, and each f℥j contain the equivalent of grs. ij of iodine.

Or it may be prepared by dissolving the hydriodate and tartaric acid, each, in syrup instead of water, mixing them together, and letting it stand for a few hours to allow the bitartrate to settle, and pouring off sufficient for the required quantity of syrup. With this latter mode, which appears the more feasible of the two, a slight decomposition takes place with the syrup in the first instance, probably owing to the quantity of sugar being insufficient to preserve it; but, after being mixed with the larger portion of syrup, it remains unchanged.

Syrup of hydriodic acid, by the first method, I have had prepared since the 3d of June, and it remains nearly colourless. I have also syrups having some colour, which have been made for several months, that have the same appearance as when first prepared. In a syrup prepared early in the winter, the sugar has crystallized out of the solution, and the liquor on the surface, now weak of sugar, has a bright-yellow colour, and gives a strong reaction with starch; but the crystallized portion is not affected by it unless a little nitric acid is also added, when it reacts strongly. Hydriodic acid being gaseous, it will not be possible to procure it in a solid form, combined with sugar. When a strong solution is mixed with powdered sugar and moderately heated, it gives off bubbles of hydriodic acid, becoming darker in colour, reacting strongly with starch, and ultimately becoming completely black, with abundance of free iodine.

The precise action of sugar, with reference to those compounds that have been named, is still obscure. Klauer considers that a regular compound is formed in the case of carbonate of iron, but the subject of this notice is an instance where the action of sugar is not confined to salts of iron. In conclusion, it is very probable that the protective agency of sugar is exercised over many other decomposable substances that have not been examined as to this property; and, if it be so, it must become of corresponding importance as a chemical agent in pharmacy.—*Pharmaceutical Journal.*

MEDICAL PATHOLOGY AND THERAPEUTICS, AND PRACTICAL MEDICINE.

10. *On Topical Medication of the Larynx.* By John Erichsen, Esq., Professor of Surgery at University College, and Surgeon to the Hospital.—The practice of treating chronic disease of the larynx by the local application of a strong solution of the nitrate of silver is by no means of very recent origin. Many years ago it was employed in this country by Sir C. Bell; and Dr. Watson, in his *Lectures*, speaks of the practice as having been extensively had recourse to by Mr. Vance, who, being a naval surgeon, applied to it the very expressive term of "swabbing." So far back as 1818, M. Trousseau states that "his preceptor," M. Bretonneau, used the saturated solution of the nitrate of silver as a local application in diseases of the larynx, applying it by means of a sponge attached to a piece of whalebone. Of late years this practice has become a very favourite mode of treatment in many diseases of the throat, and in not a few of the lungs, and has been brought very prominently before the profession, chiefly through the writings of Trousseau, in Paris, and of Dr. Horace Green, in New York.

Of the great value of the local application of a strong solution of the nitrate of silver to the throat, in many affections of the larynx, there can be no doubt. Indeed, I believe it to be impossible to bring deeply seated and very chronic inflammatory or ulcerative affections of this part of the air-passages to an equally satisfactory termination by any other means, or, indeed, to cure the majority of them without this "topical medication;" and the profession is undoubtedly under a debt of gratitude to those practitioners whose names I have mentioned, through whose example and writings the utility of this method of treatment has been demonstrated.